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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/058,391	01/28/2002	Humayan N. Shaikh	218/6	5872
7590 02/15/2005 Adams, Schwartz & Evans, P.A. 2180 Two First Union Center Charlotte, NC 28282			EXAMINER HURLEY, SHAUN R	
			ART UNIT	PAPER NUMBER
			3765	

DATE MAILED: 02/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/058,391

Applicant(s)

SHAIKH, HUMAYAN N. ED

Examiner

Shaun R Hurley

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 28 January 2002.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 January 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>07/09/04</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Drawings***

1. The drawings are objected to because in Figure 1, detail 14 reads “Dyeing Process”, while the specification specifically teaches it is in fact a --Drying Process--. Applicant is requested to correct the error. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

2. The abstract of the disclosure is objected to because in line 1, “Aa” should read --A--. Correction is required. See MPEP § 608.01(b).

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 2, 5-11, and 15-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brutel et al (4598880) in view of Beau et al (4215530).

Brutel teaches a method of processing a yarn comprising false twist texturing a partially oriented yarn (Column 4, line 27), applying the textured yarn onto a dye package (Column 4, lines 33-34), and package dyeing the yarn in a vessel having pressure, heat, and chemicals (Column 4 line 51 - column 5 line 16). In regards to drying the dyed yarn, this is inherently part of the process, since a yarn cannot be further processed (i.e. wound) in wet form, and as such, the yarn will either be actively dried as is well known in the art, or passively dried as by ambient room temperature and evaporation. While Brutel essentially teaches the invention as discussed above, including its use in a further yarn treatment apparatus (Column 3, lines 10-14), he fails to specifically teach twisting the dyed yarn. Beau teaches that it is well known to remove a yarn from a package, apply twist to it via a 2 for 1 twister, and wind it up to a cone after heat setting the twist (Abstract; Figure). By utilizing a 2 for 1 twister, the removal of the dyed yarn from its package, twist application, and subsequent winding are all performed in a single continuous process step. It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to twist the yarn of Brutel as taught by Beau, so as to provide a twisted, bulked yarn suitable for and capable of being used in further processing, such as knitting,

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weaving, and braiding. A twisted yarn would provide a more compact yarn structure, by twisting in loops and curls created by the false twist crimp, while still allowing for yarn bulk. The ordinarily skilled artisan would have understood this and known to twist the yarn in such a well known manner. Also, the combination obviously teaches the resultant yarn.

In regards to a twist of 1- 8 tpi, such a twist number is well known in the twisting art. Continuous yarns are very often provided with a negligible twist, so as to aid in yarn processing, and the ordinarily skilled artisan would have known to do such, as detailed above. In regards to the range of 1 - 8 tpi, this is considered an obvious range for negligible twist, and within the ordinarily skilled artisan's routine experimentation, as evidenced by Hatch on page 287, first full paragraph of column 2.

In regards to the yarn being a sewing thread, this is merely intended use, and so long as the resultant yarn is capable of performing the intended use, the claim is anticipated. The resultant yarn of the combination would be capable of being used as a sewing thread, as well as clothesline, or a decorative wrap for packages.

In regards to providing the yarn with a predetermined denier and elongation while imparting bulk and shrinkage characteristics, these are all inherently taught in Brutel. Every yarn has a predetermined denier and elongation; these are simply measurements of the yarn based on linear density, and stress/strain resistance. In regards to bulk and shrinkage characteristics being added, these are inherent in the process of false twist texturing, which serves to crimp the continuous filaments in a manner which widens the structural width of the yarn by forming kinks in the filaments. These kinks bulk the yarn's width by not being straight. Likewise, because the yarn filaments are no longer straight, shrinkage is now increased, due to not only the chemical

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tendency of the filaments to shrink, but also the physical tendency of kinks to curl upon themselves.

5. Claims 3, 4, and 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brutel in view of Beau as applied to the claims above, and further in view of Applicant's Specification.

The combination of Brutel in view of Beau essentially teaches the invention as discussed above, but fails to specifically teach using heat, extraction, or both to dry dyed yarn packages. Applicant's Specification teaches that it is well known in the art to utilize such methods to dry dyed yarn packages (Page 1, paragraph 3). It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to utilize heating and extraction to dry yarn, so as to expedite the drying of the yarn as compared to ambient temperature drying. The ordinarily skilled artisan understands that a yarn must be dried before it can be further used in textile manufacture, and as such, would appreciate the ability to dry a yarn faster than air drying. As taught by Applicant's Specification, such use is well known, and would have been well within the ordinarily skilled artisan's abilities.

### *Conclusion*

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Tung (6098392), Dür (5979154), Brueckmann et al (5534166), Ballhausen et al (5428948), Mima et al (5189872), Matsui et al (4928475), Brierley et al (4916769), Carr et al (4045858), and Yelton et al (3974534) all teach what is well known in the yarn dyeing and twisting art.

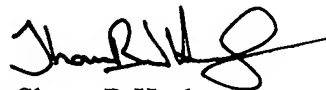
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7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shaun R Hurley whose telephone number is (571) 272-4986. The examiner can normally be reached on Mon - Fri, 6:30 am - 3:00 pm, off second Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John J Calvert can be reached on (571) 272-4983. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SRH  
10 February 2005

  
Shaun R Hurley  
Patent Examiner  
Tech Center 3700